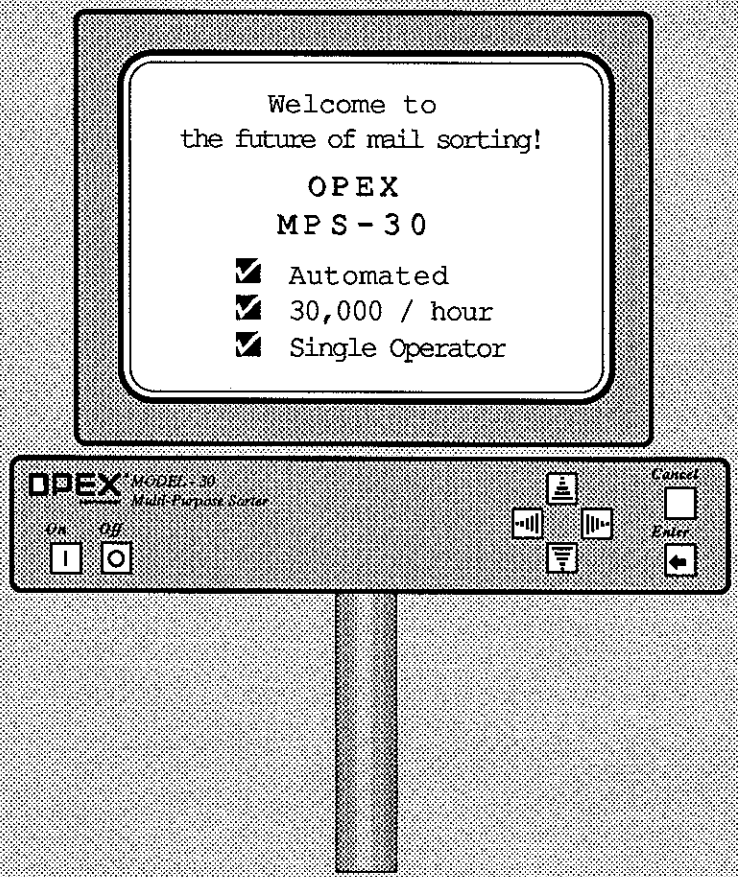
OPEX®
CORPORATION



MPS-30
OPERATOR TRAINING MANUAL

A MESSAGE FROM AL STEVENS,
President, OPEX Corporation

Thank you for choosing OPEX for your mail sorting and handling needs. For two decades, OPEX has been the industry leader in mailroom automation technology. This, I believe, is because we have always stressed two very important ideas: quality and service.

Our company's reputation is at stake with every machine that we make; this is certainly so with your MPS-30.

I am excited about the MPS-30. Its introduction marks a step forward for OPEX. For years, we have concentrated on the business of extracting contents from envelopes. Now, with the MPS-30, we are also able to help you deal with the sometimes nasty business of sorting envelopes as they come to you from the Post Office.

With this new technology, you and other operators will be able to process your mail faster. No more looking for credit cards trapped between papers in an envelope. No more looking for double checks or double stubs tucked into an envelope. No more quickly reaching for contents only to come across an unexpected staple.

The focus of all this brings me back to my statement about quality and service. We have built a quality product which will, in turn, enable you to produce quality work more quickly and more efficiently than in the past. The MPS-30 will improve your production and that of your shop. In addition, you ought to have a personal sense of accomplishment and satisfaction in operating a machine as capable as the OPEX MPS-30!

Should you ever have a question or want to discuss a problem, your OPEX representatives will always be available. That's what I mean when I refer to OPEX service.

So, to you—the MPS-30 operator—I wish the very best in your job. I hope our "mail sorting miracle" makes your job easier, more enjoyable and more worthwhile!

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Contents

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"WHAT IS AN MPS-30 ?"

Congratulations!

You are about to operate a fascinating piece of equipment, probably much different than anything that exists in your mailroom already. While the machine might look a bit overwhelming, you'll probably be pleasantly surprised at how easy it is to operate.

At this point you may be asking yourself, "What exactly is this MPS-30 that I'm supposed to enjoy operating?" To answer that question, a little history might prove helpful.

About twenty years ago, Opex determined that there was a need for machines which could open envelopes and help operators extract the contents. From this idea came the first single operator workstation, the Rapid Extraction Desk (or "RED" for short). You may even have some of these workstations in your facility.

These workstations proved to be an instant success. They were efficient and helped operators break free of the sometimes boring routine of opening envelopes by hand.

Opex soon discovered that there were some facilities with extremely high volumes of mail which could benefit from a machine capable of processing more envelopes at a faster speed. From this came the Opex System 100, which again some of you may have in your workplace.

If you've ever worked with a large volume of mail, one thing you have probably noticed is that it is unpredictable. An envelope might have two payments in it instead of one. Another envelope might have a check stapled to a piece of paper. You just never know. Regardless of whether you are using Opex REDS, a System 100, or opening mail in some other fashion, you'll no doubt agree that the job is easier and faster when you know exactly what you are going to get when you open an envelope.

That's where the MPS-30 fits into the picture. "MPS" stands for "Multi-Purpose Sorter." The MPS-30 does the job of "looking" into envelopes for you before they are even opened! It "sees" exactly what is in each envelope as it comes from the Post Office and puts all envelopes that are alike into nice, neat stacks in special "sort bins."

And the truly amazing thing is that it does this at a rate of up to 30,000 envelopes per hour, using only one operator like yourself!

So exactly what does the MPS-30 "see" when it sorts envelopes? The following list will give you an idea:

(Please Note: Your machine may or may not be equipped to do all of the things mentioned below.)

1. Sort by Gross Thickness/Gross Height/Gross Length.

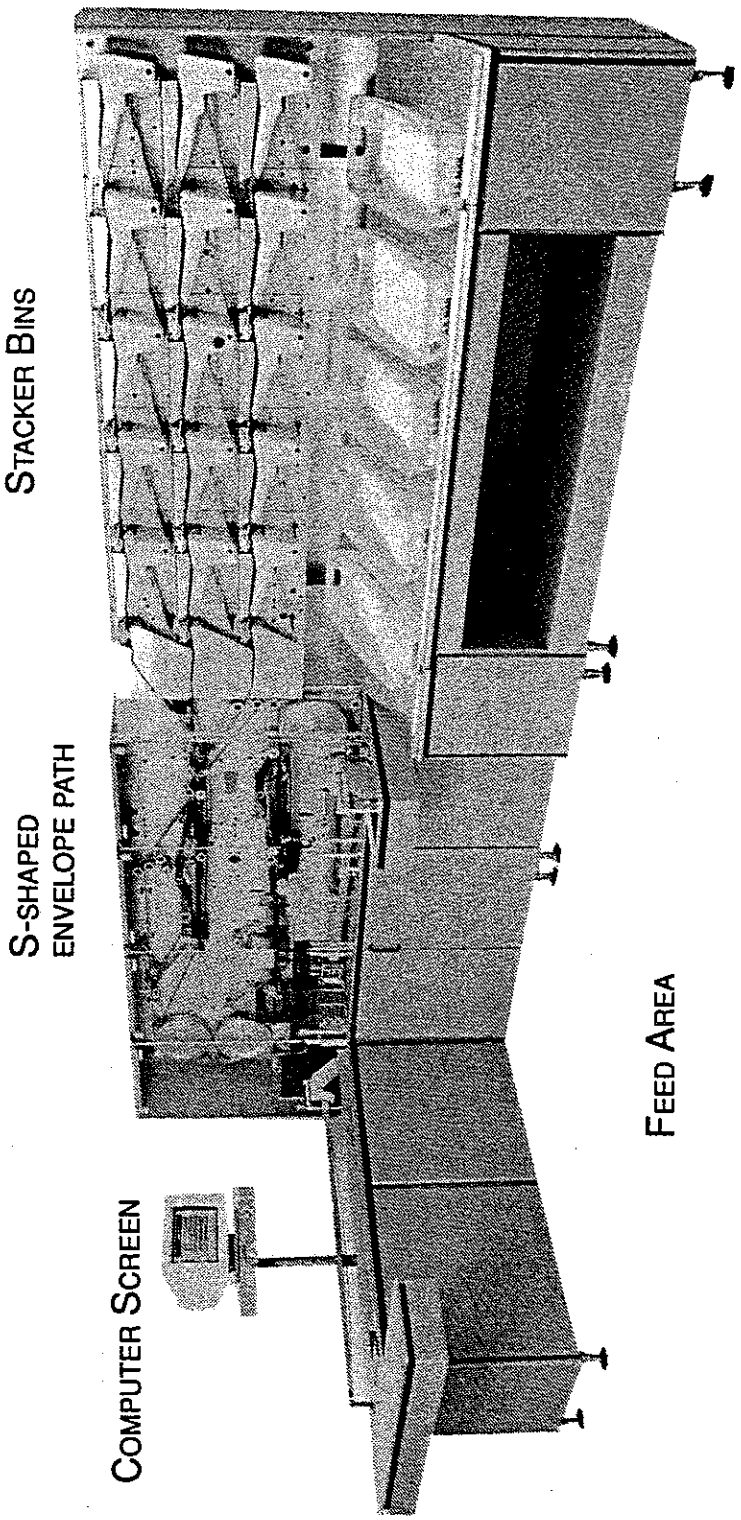
The MPS-30 is designed to run First Class Mail from the United States Post Office. Envelopes which are too thick, too tall or too long to be processed through the machine will be "outsorted." (This is a term which will be discussed later.)

2. **Sort by Envelope Length.**
Envelopes may be sorted into any sort bin based upon differences in length.
3. **Sort by Damaged Envelope Corners.**
Envelopes that have been damaged during mail handling can be sorted into a separate group.
4. **Sort by Special External Envelope Marks (UMD).**
Universal Mark Detection (UMD) reads a mark or marks printed on the outside of the envelope. The MPS-30 "reads" these marks and sorts the envelopes based upon a job's requirements.
5. **Sort for Proper Envelope Orientation.**
The MPS-30 can read the stamp or meter mark on the envelope and determine whether or not the envelope is turned in the right direction. All envelopes not correctly oriented can be sent to special sort bins.
6. **Sort for Change of Address (Checked Box on the Envelope).**
The MPS-30 will examine the small change of address box on an envelope. If a check-mark or some other writing appears in this box, the machine will put this mail in a special sort bin.
7. **Sort for Fine Thickness.**
The MPS-30 can "see" if an envelope contains the right amount of papers and checks or "see" if something is missing or has been added to the envelope. Based upon what it finds, the machine will then put the envelope in the proper sort bin.
8. **Sort for Metal.**
Envelopes containing paper clips, staples, coins, etc. are found by the MPS-30 and put into a pre-assigned sort bin or bins.
9. **Sort for Proper Check Orientation.**
This application of the MPS-30 determines the direction of a check in a windowed envelope. The machine does this by reading the special magnetic ink printed on a check. (This process is referred to as "MICR," which stands for "Magnetic Ink Character Recognition.")
10. **Sort for Presence of a Check.**
Using this function, the MPS-30 can be made to determine whether or not an envelope contains a check.
11. **Sort for an Opex-Designed Bar Coded Document.**
The MPS-30 can sort envelopes based upon finding a special "code" on a document inside the envelope.

Had enough? A bit overwhelming, isn't it? As if this wasn't enough, the MPS-30 can also sort envelopes based upon various combinations of those items listed above! The machine can even open envelopes as it sorts them. And the job of operating this equipment has fallen on your shoulders!

Don't worry! Take heart! It's really not difficult at all once you get used to it.

To get you started, you will want to become familiar with the MPS-30 by looking at the drawing on the next page.


STACKER BINS
FINISHED WORK
S-SHAPED ENVELOPE PATH
FEED AREA
COMPUTER SCREEN

SAFETY FIRST!

Your first responsibility as an MPS-30 operator is safety: your own and that of your co-workers. For your safety, the MPS-30 has the following features built-in:

- **COVER GUARDS:**

  The envelope path (the path taken by the envelope through the information-gathering portion of the machine) is protected by cover guards. These allow you to see what is going on without risk of injury. The machine will not start up if a cover is open. During operation, it will stop operating whenever one of these covers is opened.

- **INTERLOCKS:**

  Belts and pulleys, spinning at high speed, can cause problems for a careless operator. They can grab long hair, neckties, scarves, or loose clothing. As a precautionary measure, electro-mechanical interlocks have been installed on the MPS-30. These interlocks will shut down your machine whenever a door is opened.

- **PANIC BUTTONS:**

  Big, red, mushroom-shaped "Panic Buttons" are used to stop the machine in an emergency. Learn where they are along the machine. To stop the machine using a panic button, just push the button. You can do this by pushing on the button with your hand, your thigh or your hip. Your machine will stop immediately. In order to turn the machine on again, you must pull out the Panic Button, press the "ON" button, and press the 'ENTER' button.

Our engineers have gone to great lengths to design your MPS-30 so that it can be operated safely. Therefore:

NEVER DISABLE ANY OF THE ABOVE FEATURES! Doing so will not increase your productivity in any way. It will put you and your company at risk should anyone be injured.

STEPS TO FOLLOW FOR YOUR SAFETY:

1. Read this Manual. If you know how the machine works, and what to expect, you're less likely to get into trouble.

2. Understand what this machine does, and how it does it. This is covered in the Manual on the following pages. Read these pages before you start pushing buttons!

3. Wear appropriate clothing when operating the MPS-30. Neckties, scarves, and loose-fitting blouses or sleeves are not appropriate for the job and could cause a problem.

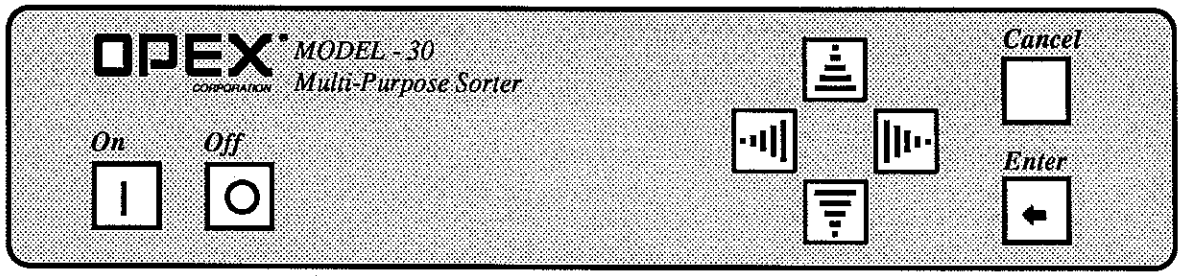
4. If you have long hair, tie it back so that it does not hang down in front of you as you are working.

5. Listen to your machine. You will soon become familiar with the sounds made by your MPS-30 as it runs. Immediately report any unusual sounds to your supervisor.

The MPS-30 Control Panel

Before you can even begin to operate the MPS-30, you must become familiar with the Control Panel. This is not unlike getting into a new car for the first time, and examining the dash. Fortunately, the control panel of the MPS-30 is far less complicated!

To help you locate the various keys, examine the diagram below:



As you can see, this isn't too bad. The function of each of the keys is described below:

"ON" Button
Powers up the MPS-30. (You first must press the "OFF" button; this is a security feature which helps to prevent unauthorized individuals from turning on the machine.)

"OFF" Button
Stops power to the MPS-30. (With "OFF" button in the up position.)

"ARROW KEYS (UP, DOWN, LEFT AND RIGHT)"
These are used to move the highlighted cursor throughout the various screens and menus as you operate the machine.

"CANCEL" Button
Stops production or returns you to the previous screen or menu.

"ENTER" Button
Tells the MPS-30 to perform whatever action you have highlighted with the cursor.

Once you have become familiar with the control panel and keys on the panel, you're finally ready to power up the machine.

POWER-UP!

Now the part you have been waiting for: Putting some power to the machine and beginning the job! Powering-up the MPS-30 is easy. Just follow the steps outlined below.

Starting the MPS-30:

1. Make sure the "OFF" button is pushed in. It will "lock" into place when you push it. It will release when you push it again. You cannot power-up the machine if the "OFF" button has not been depressed.
2. Press the "ON" button and the MPS-30 will begin its power-up sequence. The "ON" button should light when you push it.
3. If the "ON" button fails to light, you should check the following things:
   a. Is the machine plugged in?
   b. Is the "OFF" button pushed in all the way?
   c. Are all of the doors on the machine closed?
   d. Are all of the Panic Buttons pulled out?
   e. If the machine still fails to power-up, check the main power breaker. You will find this behind the front double-doors of the machine, underneath and to the right of the computer. The red handle must be turned so that it is facing straight up and down.
   f. If the machine still does not run, notify your supervisor and contact your Opex service technician.

Warm- Up Period:

We recommend that you allow the MPS-30 about 10-15 minutes to "warm up" after you have started it and before you begin processing envelopes. Allowing the machine this period of time will help it to process your mail more effectively.

The time spent waiting for the MPS-30 to warm up does not have to be wasted time. There are several things you can do in terms of preparation which can easily be done during this time. These things are talked about in greater detail below, and include simple cleaning, preparing the mail, and loading the mail.

Mail Preparation:

While the machine is warming up, you should take a close look at the incoming mail. All "extra thick" mail, (mail over 1/8" thick — about the thickness of three dimes stacked together) should be removed.

Also, any envelopes which look damaged should be removed from the mail you are going to load into the MPS-30. These can be processed by hand.

Carefully examining the mail before you load it into the machine will greatly reduce the potential for envelope jams as you are operating the MPS-30.

Simple Cleaning:

While the machine is warming up, it is a good time to do some simple cleaning. The list below should be performed at least once during every shift the machine is operated. The best time to do this, of course, is while you are waiting for the machine to warm up.

Simple Cleaning (continued)

Your Opex sales representative or service technician will teach you the exact way to do each cleaning task described below. This cleaning is not difficult or time-consuming (you should be able to easily do it right before you begin processing mail), but it is important. Just like your car, the MPS-30 functions best when it is clean and well-maintained.

At the beginning of your shift, you should:

1. Clean the feed belts;
2. Clean the retard belts;
3. Clean the pre-feed O-rings;
4. Clean the orange rollers in Gross Thickness Area;
5. Clean the LVDT rollers;
6. Blow any dust out of the UMD, Metal, LVDT and Stamp Detect Modules;
7. Vacuum the feed, twister and Outsort Areas;
8. Clean all sensors including the conveyor sensors, gross entry sensors, outsort sensors, path sensors and bin sensors; and
9. Check the slitter trash bag.

While this may appear to be a long list, you will find that with experience, you will do these things automatically before you begin your work.

Good news! You are now ready to load some mail.

Loading Mail:

Loading the machine is a simple process:

1. Grasp a handful of mail from the mail tray.
2. Turn the mail over in your hand and inspect the bottoms of the envelopes. Pull out any damaged or "extra thick" mail.
3. Load the mail onto the Feed Conveyor with the address side of the envelope facing towards you. The mail should be top-side up so that you could read the address if you looked at the envelope. The stamp or meter mark should be in the top right corner of the envelope. This is important. The machine is manufactured to process mail only in this fashion. Envelopes not loaded in this manner will be outsorted.
4. Make sure that the nearest side of the mail touches the right guide rail.
5. At this point, a handful of envelopes should be resting against the metal cleaver. (You can easily recognize the cleaver because of its handle and the fact it resembles an old-fashioned meat cleaver.) Carefully lift the cleaver by its handle and bring it towards you. Gently push it back against the front of the last envelope loaded. Don't push the cleaver against the envelopes too hard; this will interfere with the machine's ability to feed envelopes.
6. Repeat steps 1 - 5 until the Feed Conveyor is fully loaded with mail. The envelopes will feed better if you load them with the tops leaning slightly toward the cleaver.

As mentioned earlier, nothing described in this Section is as difficult as it may seem at first. With practice, you'll be a pro at prepping the machine and the mail. You'll soon be able to do everything talked about here almost without thinking.

The machine is now warm. It has been cleaned. The mail is loaded. It's time to let the MPS-30 do its work sorting the mail.

OPERATION AND SCREEN SUMMARY

OVERVIEW OF MACHINE OPERATION

Before each computer screen and operation is explained individually, it will be helpful to be given a summary of how the machine operates. Seeing the 'big picture' usually makes the smaller picture easier to understand.

As you begin, keep in mind that the MPS-30 has been designed for easy operation, using only one operator. It is simple to operate. The color computer monitor will guide you during the entire operation of the machine. It's a good idea to become very familiar with it and to watch it closely as the machine runs.

Once the MPS-30 is powered-up, the display screen on the computer monitor will tell you to select an operator's name. You will probably find your name in the computer. Select your name from the list, enter your password and the display will change to **MAIN MENU.**

From the Main Menu, you will select the correct **JOB NAME** for the envelopes you are sorting. The machine will automatically adjust all of the necessary job settings so that the mail will sort in a specific manner. At this point, the display screen will change to the **RUN JOB MENU.**

In addition to continuous operation, the Run Job Menu will allow you to run 1, 5, or 25 envelopes. This is useful because you can make sure the job is operating properly before you tell the machine to operate continuously.

After carefully loading and preparing the mail, as described in the previous Section, you may then select the 'Run Continuous' option on the display screen. The MPS-30 will start sorting envelopes.

As each envelope goes through the machine, the MPS-30 "looks" at it to determine several things. First, it goes through a 'length/ height/ thickness' detector to determine if the envelope is too long, too tall or too thick for the machine to handle. If the envelope fits into any of these categories, it will be "outsorted;" that is, it will be directed to the holding bin on the front part of the machine for later processing by hand.

Next, the envelope passes through several "modules," which are special units on the machine designed to determine different facts about each envelope. Depending on what has been ordered for your particular machine, the MPS-30's modules do such things as determine the length of the envelope, find staples and paper clips, tell whether there is a check in the envelope, look for special marks on the envelope, and do many other things which are spelled out in greater detail in the "MPS-30 OVERVIEW" portion of this Manual.

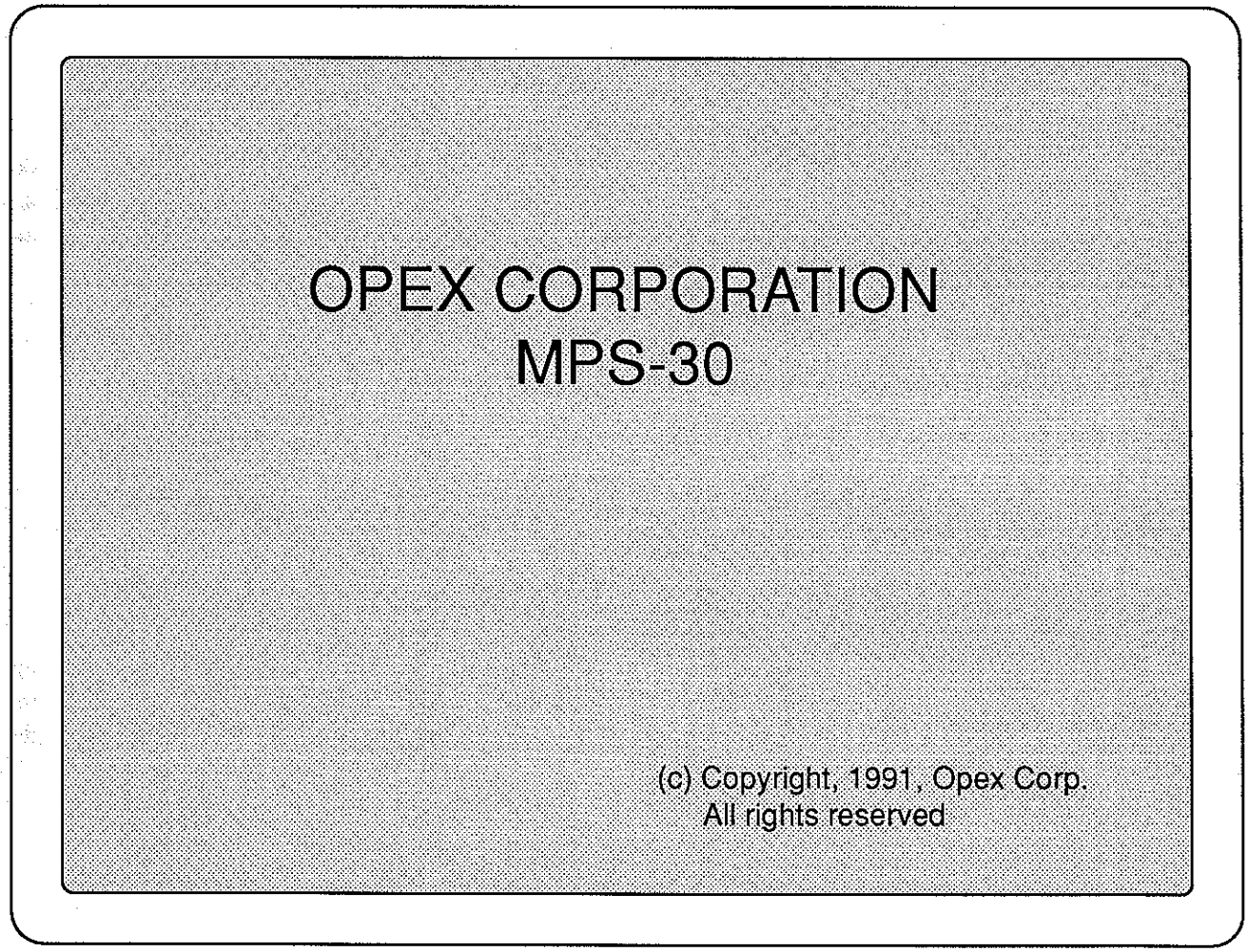
Each envelope is then placed into a special pocket called a "sort bin" based upon its individual characteristics. For example, an envelope containing two checks instead of one may go into its own sort bin. Another envelope may have several items paper stapled together. This would go into a separate sort bin. The number of different sorts wil vary depending upon the needs of each job.

While the MPS-30 is running, it is your job to remove sorted envelopes from the sort bins. These sort bins have been pre-assigned as to which envelopes will be in each bin. You will become familiar with the sort patterns associated with the job you are running, and must make sure that you place all sorted envelopes in the correct mail trays.

SELECTING AN OPERATOR

'DISPLAY' Screen

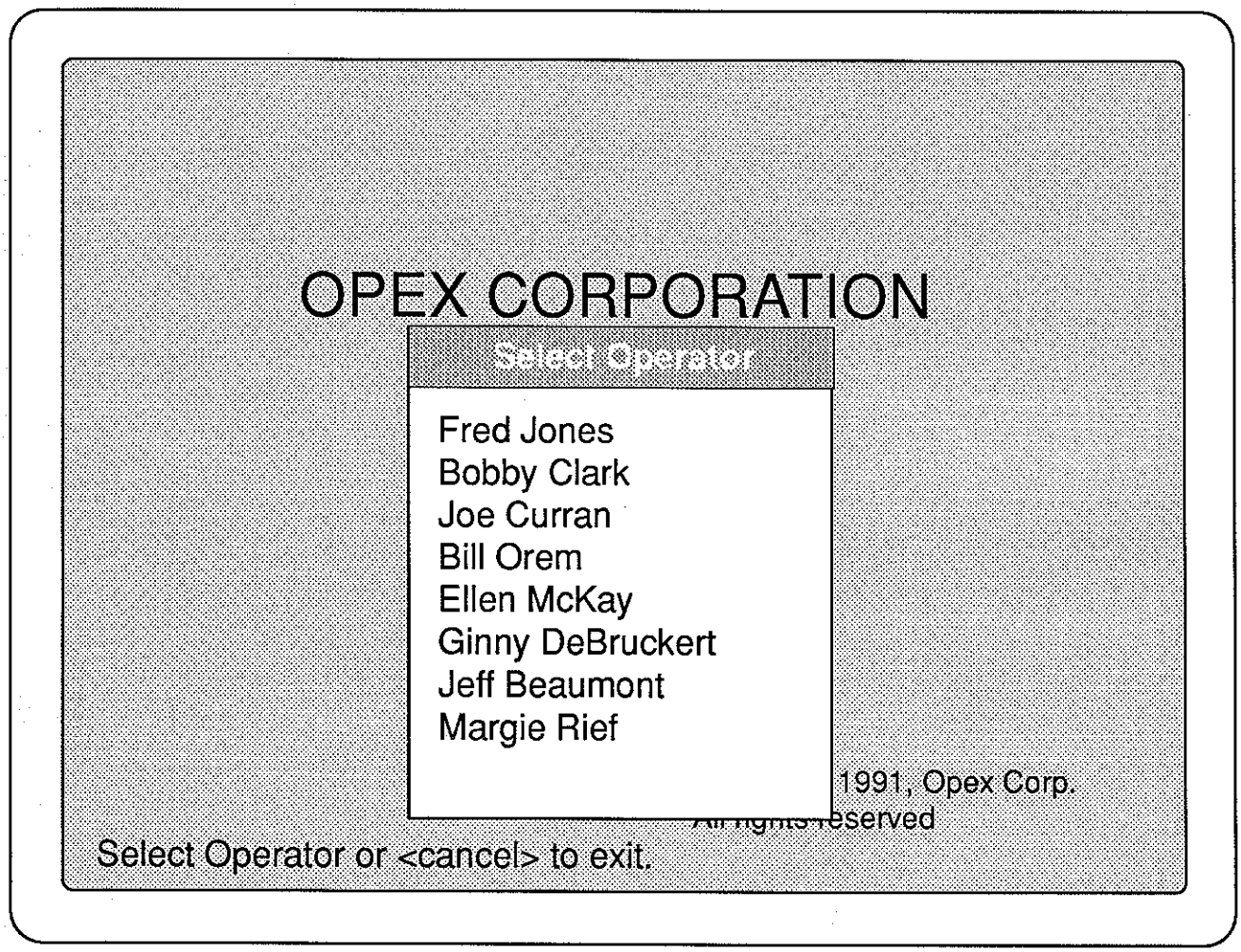
Once the MPS-30 has been powered-up, the Display Screen will appear as follows:



Press the "ENTER" button once and a listing of eligible operators will be displayed, as seen on the next page.

'SELECT OPERATOR' Screen

Your name will appear on the list of approved operators on the screen. If your name does not appear, stop now, and speak to your supervisor.



Use the UP or DOWN button to highlight your name. Press ENTER to select yourself as the operator. A new display will appear, asking for your password.

Using a password protects both you and the equipment. Not knowing your password keeps someone else from running a job under your name, thereby altering your performance statistics.

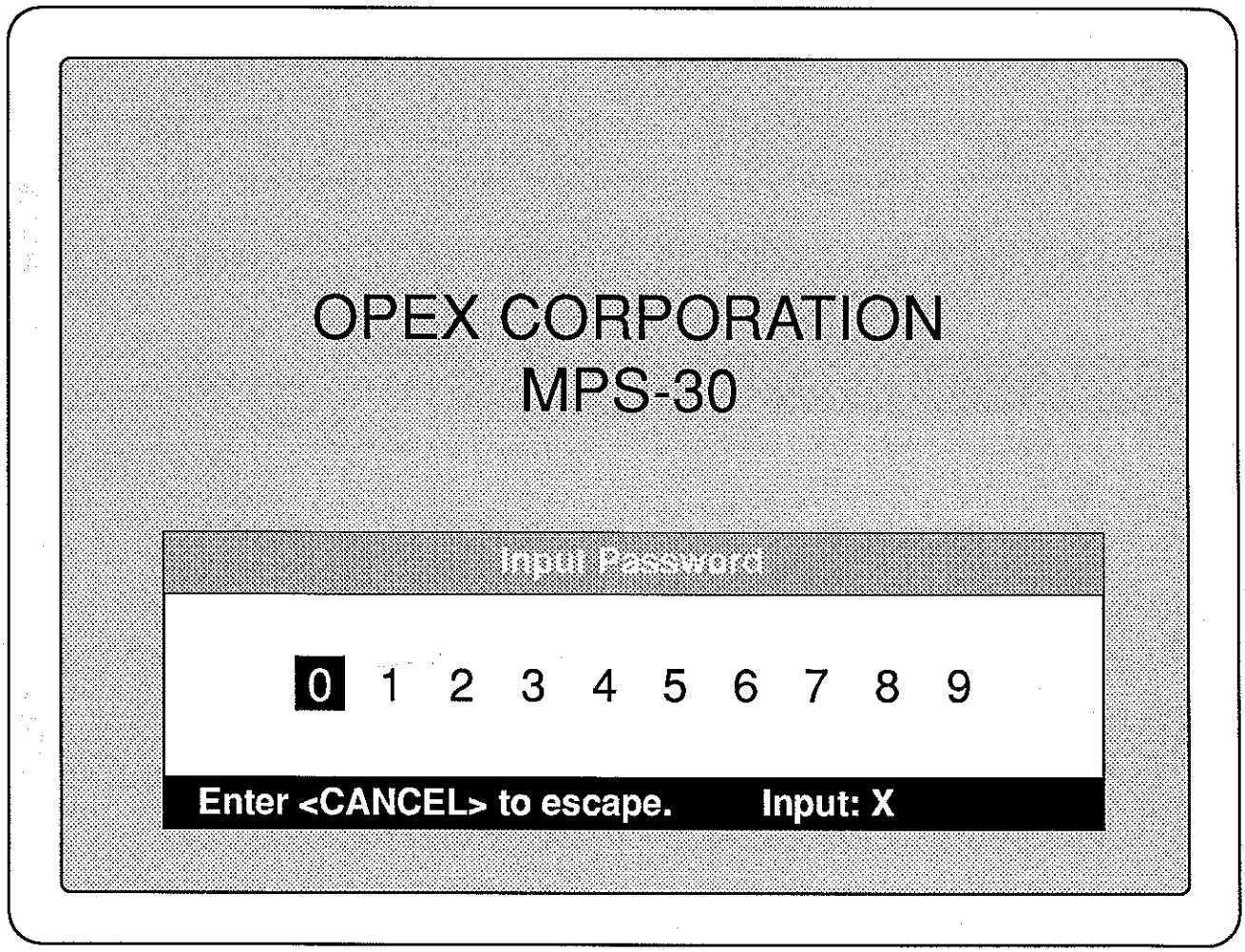
More importantly, the use of password security prevents someone without your training from using the MPS-30 improperly and damaging it.

You should never give out your password to unauthorized personnel.

'INPUT PASSWORD' Screen:

Operators usually are required to enter a password to use the MPS-30. This number will have been chosen by you in advance and programmed into the computer by either your Supervisor or Opex personnel.

The Input Password Screen is illustrated below:

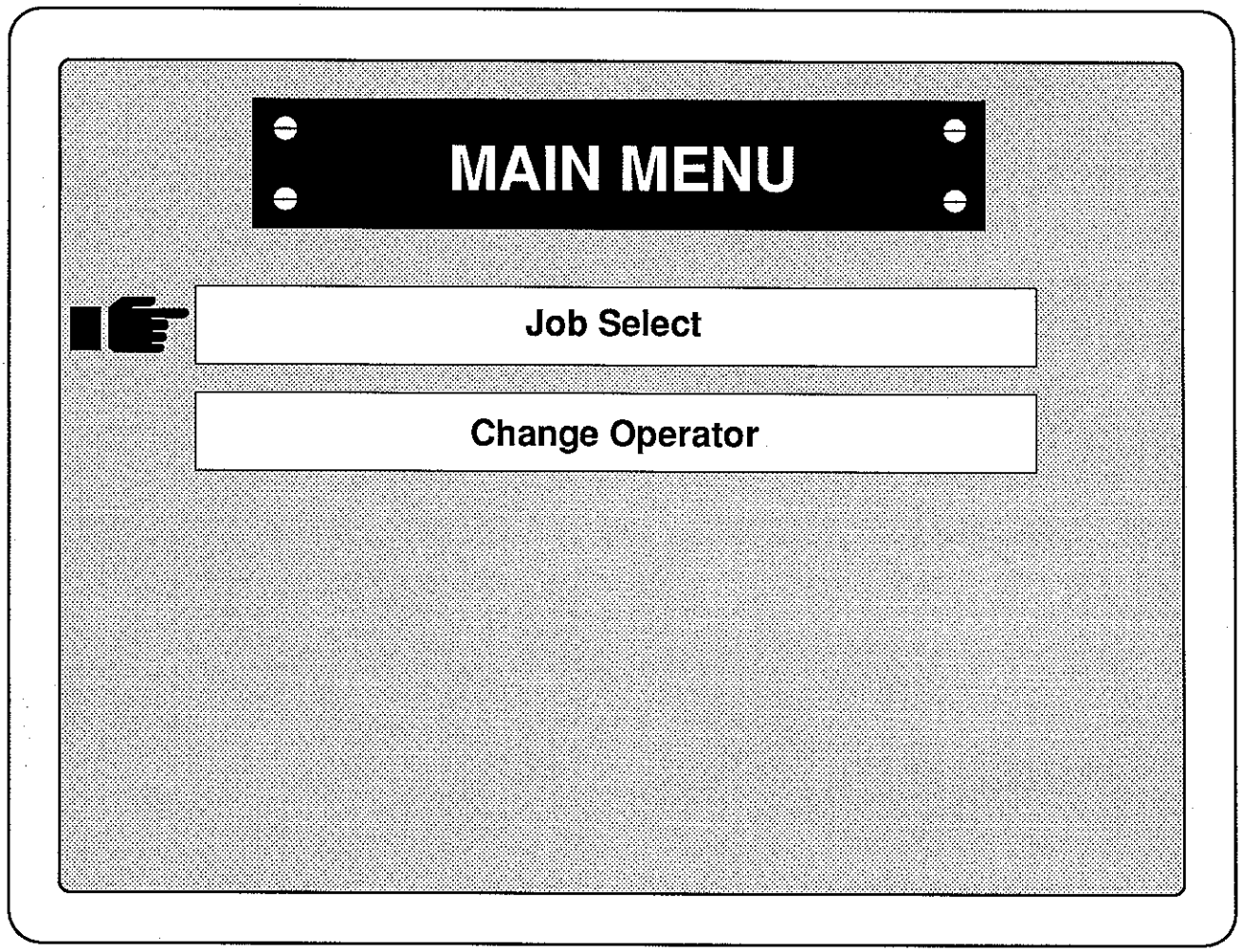


In order to enter your password, use the LEFT or RIGHT ARROW KEYS to move the highlighted area to the first number of your password. Once the first number has been highlighted, press the ENTER button. Repeat this process until all four of your password numbers have been entered.

Upon successful password entry, the screen will change to the MAIN MENU Screen. If you have entered the wrong password, the DISPLAY Screen will return as before. If that happens, start the process once again until you have successfully accessed the system.

'MAIN MENU' Screen

The MAIN MENU Screen allows you to choose the job you wish to run. Once you have chosen the appropriate job, the machine will automatically adjust to the sort pattern designed for those particular envelopes. For your reference, the Main Menu Screen is illustrated below:



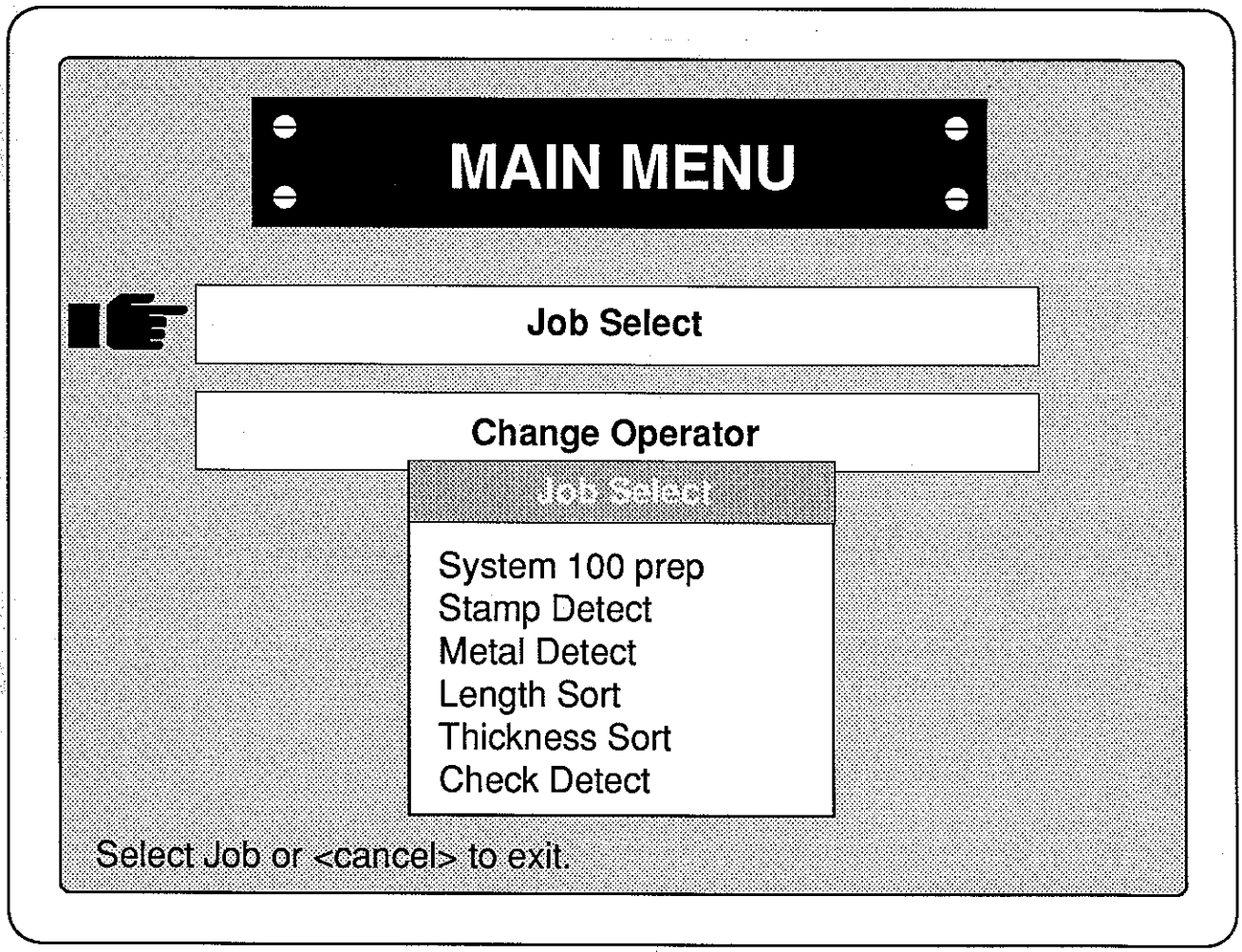
The Main Menu Screen also allows you to change operators should someone else need to operate the machine. Each of these functions is described in greater detail on the following pages.

'Job Select' Option, MAIN MENU Screen

Selecting this option from the MAIN MENU Screen allows you to choose the job you are going to run. Once you have selected a job from the , the MPS-30 will sort your mail according to pre-assigned specifications for the job you have chosen.

To select the desired job, simply use the UP or DOWN ARROW KEY to move the "Pointing Finger" to the JOB SELECT option on the screen.

Now press the ENTER button. A list of job names will be displayed. The screen will look like this:

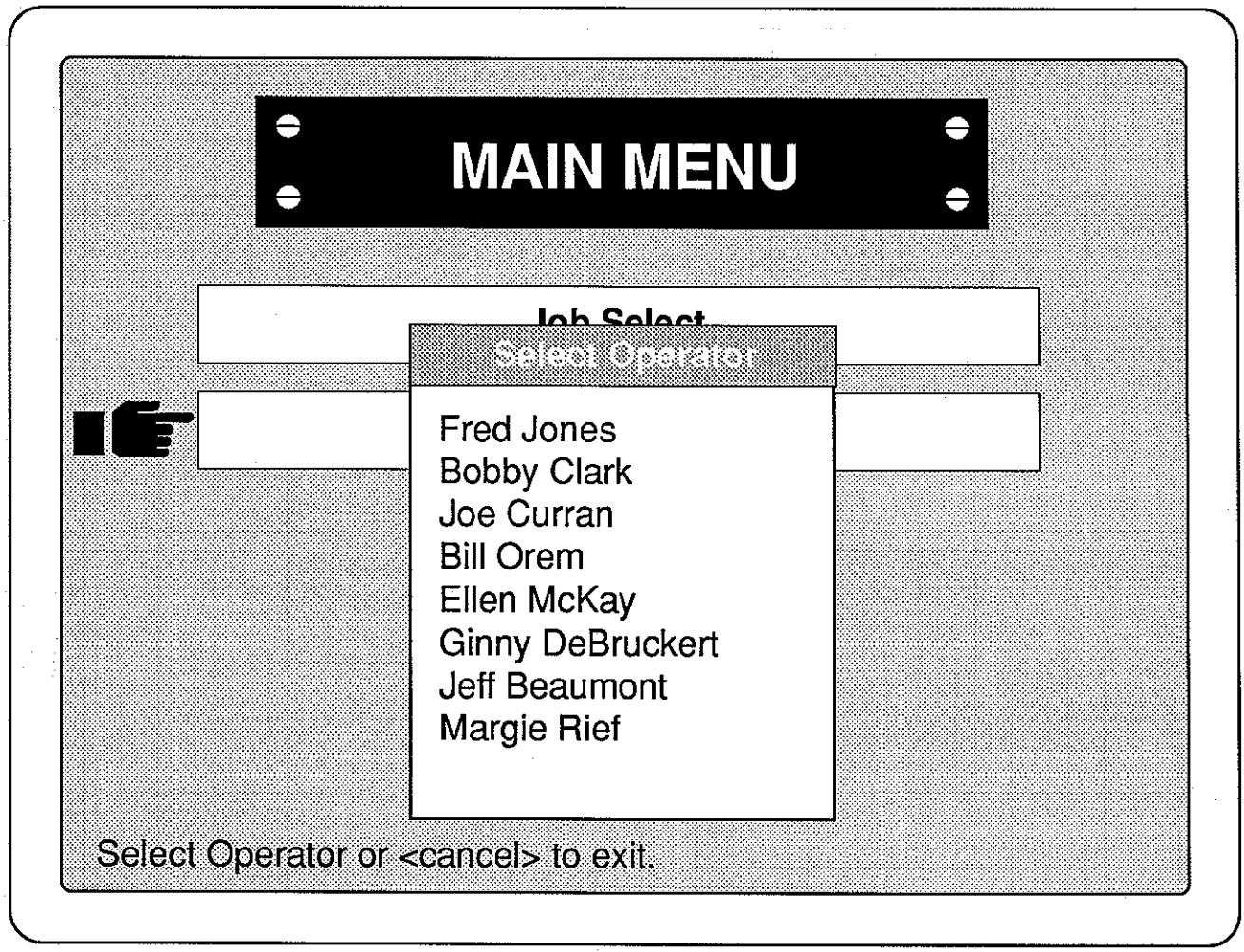


Use the UP or DOWN ARROW KEY to move the highlight to the correct job name. Press the ENTER button. The RUN MENU will now be displayed. The Run Menu is explained in greater detail later.

'Change Operator' Option, MAIN MENU Screen

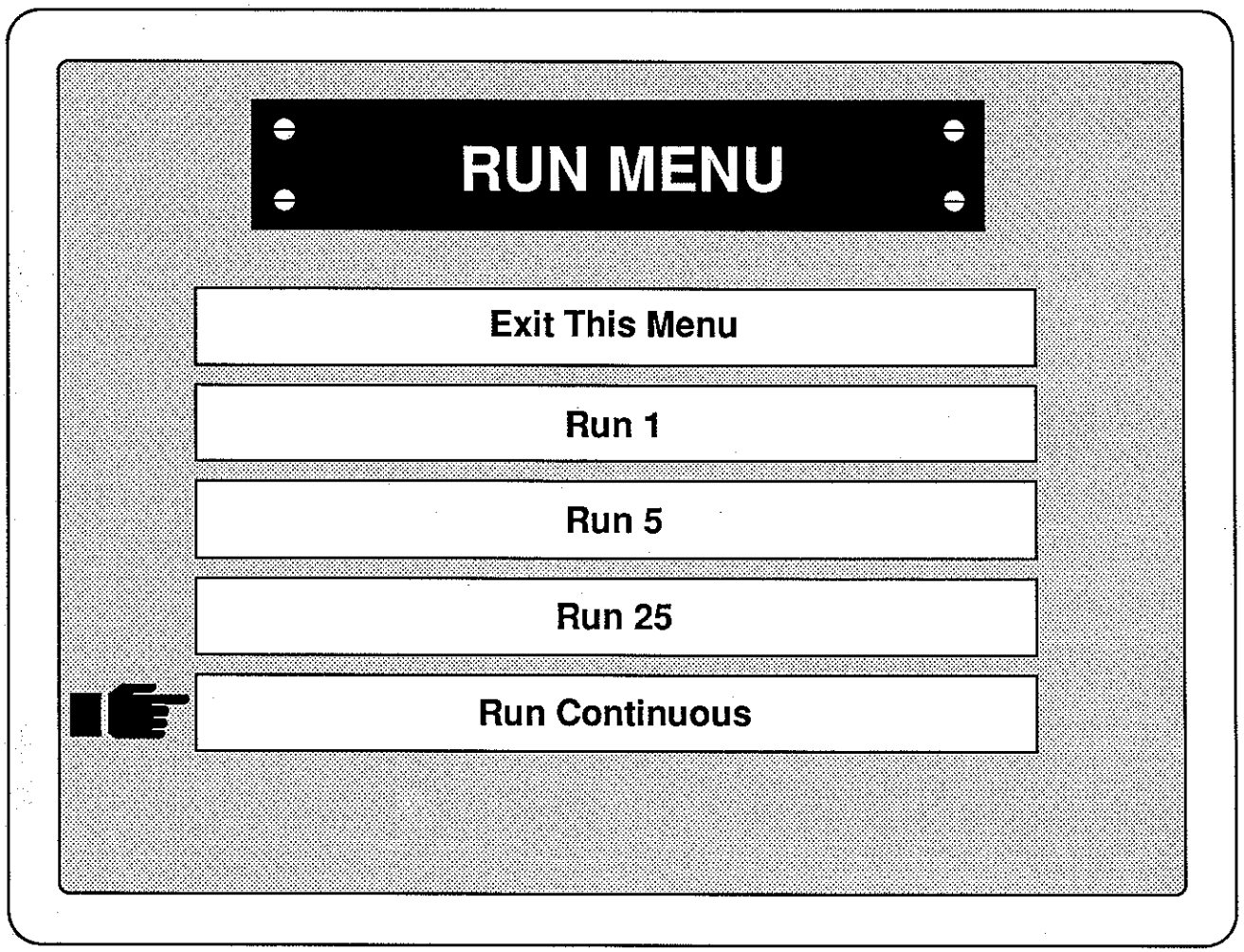
If you need to change operators, use the Up and Down Arrow Keys to move the "Pointing Finger" to this option and press the "ENTER" button.

"Select Operator will appear on the screen. Each operator must select his / her name and enter a numerical password as discussed on page 13 in the "Select Operator" portion of this Manual.



'RUN' MENU

After you have selected the job you wish to run, the Run Menu Screen will appear as illustrated below:



Selecting an option on the Run Menu will allow you to sort envelopes with the machine. Several choices are available on this screen. These choices are discussed next.

PLEASE NOTE: When you select any of the "Run" options, the MPS-30 will "BEEP" and wait about 4 seconds before actually feeding mail from the Feed Conveyor. Do not be alarmed when this happens; it is the machine's way of telling you that it is about to run.

"**Run 1**:" Use this option to run a single envelope through the MPS-30. Running one envelope allows you to make sure the envelopes are feeding properly, that the belts and sensors are clear, and that the path the envelope takes through the machine is also clear. Use the Up and Down Arrow Keys to move the "Pointing Finger" to this option. Press the "ENTER" button.

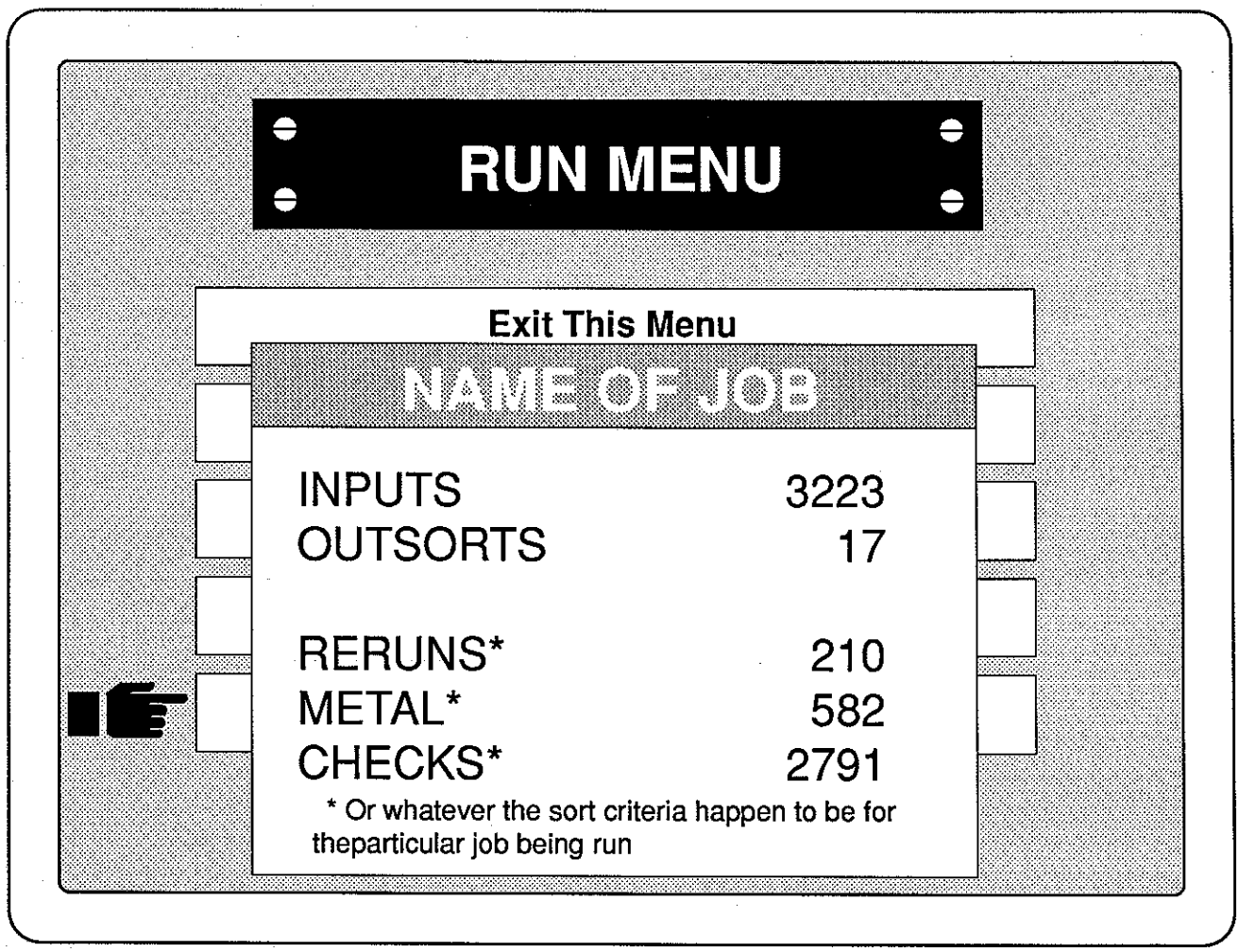
"**Run 5**:" Use this option to run 5 envelopes through the machine. Use the Up and Down Arrow Keys to move the "Pointing Finger" to this option. Press the "ENTER" button.

"**Run 25**:" Use this option to run 25 envelopes through the machine. This can serve as an expanded "test" of your system without taking the chance of incorrectly running a large number of envelopes. Make sure everything is operating properly and in order. Examine the envelopes as they are sorted to make sure you have chosen the right job. Use the Up and Down Arrow Keys to move the "Pointing Finger" to this option. Press the "ENTER" button.

"**Run Continuously**:" Use this option to let the machine run the job continuously. It will operate uninterrupted except for occasional jams, which are easy to clear and discussed later. You will also need to continue feeding mail into the machine while the MPS-30 does its work. Use the Up and Down Arrow Keys to move the "Pointing Finger" to this option. Press the "ENTER" button.

If you are in the "Run 1," "Run 5," or "Run 25," modes and you wish to let the machine run continuously (or you want to choose a different option), press the "CANCEL" button, and then select the "Run" mode you desire.

When the machine is running continuously, you will see the following diagram on your computer screen:



'Exit This Menu' Option, RUN MENU Screen

Select this option to return to the Main Menu Screen. (See previous Section.)

Use the Up and Down Arrow Keys to move the "Pointing Finger" to this option. Press the "ENTER" button.

That's basically all there is to running the MPS-30! It's probably easier than you originally thought it would be.

Actually, there are a couple of other things to know about running the machine, but you are well on your way to becoming an experienced operator.

Read on for some additional information that will help you as you process the mail.

LOADING MAIL DURING OPERATION

Once you have chosen the "Run Continuously" option from the Run Menu, the MPS-30 will operate until all envelopes are sorted, until the machine experiences a jam, or until the Feed Conveyor is out of mail.

Since the machine runs at such a fast rate, you will no doubt have to load mail during the job. To do this, you should grasp a handful of mail as you did when you first loaded the machine, inspect it, and place the envelopes against the metal cleaver as before.

Lift the handle of the cleaver and place it in front of the last envelope loaded, again being careful not to push it too hard against the envelopes. Also be careful not to interfere with or move the envelopes already in place on the Feed Conveyor.

For detailed instructions on loading mail, please refer back to the "Power-Up!" Section of this Manual.

EMPTYING SORT BINS

As mentioned earlier, while the MPS-30 is running it will be your responsibility to remove sorted envelopes from the sort bins. These sort bins will contain envelopes sorted in a very specific manner.

You should become familiar with the sort patterns associated with each job. Make sure that you place all sorted envelopes in the proper mail trays.

Each of the sort bins has a red light on it. These lights become lit whenever a sort bin is full. When the light turns on, it is a signal to you that the sort bin should be emptied. Keep an eye on the sort bins and watch for the red lights!

When the bin is full, the red light will come on. After the light is on, wait a few seconds before removing envelopes from that sort bin. There may be envelopes still on the track assigned to that particular bin. This allows time for them to actually get into the bin before you empty it.

Place all of the envelopes you remove from a sort bin into the correct mail tray. *You wouldn't want to accidentally undo all of the sorting work the machine has just done!*

Do not push the Red Button located on the sort bins unless there is a problem for which you need to take the bin out of service. The Red Button acts as an "override" which tells the machine to immediately stop putting mail into that particular bin. For this reason, the Red Button should seldom be pushed. There may be situations, however, where it is necessary

to use the Red Button. An example would be if the envelopes are jamming as they enter the sort bin or if they are not flowing smoothly into the sort bin area. Again, these situations should be rare. If the Red Button has been pushed, simply press it once more to put that particular bin back into service.

MACHINE JAMS

Let's assume that you have properly inspected the mail before loading it. Let's also assume that you have removed damaged envelopes and those that appear too thick to run through the machine. Also assume that you have loaded the mail onto the Feed Conveyor correctly and that the mail is facing the proper direction. You've warmed up the machine and done a good job of cleaning it.

Can you now expect to sort your mail without running up against an envelope jam?

The answer is "no." Although doing everything talked about above will greatly reduce the frequency and number of envelope jams, they are still bound to occur.

This is nothing to worry about! You can learn to clear jams quickly and efficiently. With a little practice, your MPS-30 can be back in operation within a few seconds of a jam occurrence. The machine actually helps you with this process.

During operation, when a jam occurs in the envelope path, your MPS-30 takes over and immediately begins the task of helping you clear the jam. The machine will stop and a special Jam Screen will appear on your computer monitor to tell you exactly where the jam occurred:

Once you have looked at the screen and determined where the jam is, you can easily clear it.

CLEARING A JAM To clear a jam, follow the easy steps outlined below:

1. **Look at the machine diagram on the Jam Screen.** Important pieces of information will stand out. They will be highlighted and will blink to grab your attention:
    a. The Screen tells you the location of the jam. Look at the Jam Screen illustrated above. The highlighted area identifies the specific location where the jam is.
    b. The Screen identifies by number the specific sensor that declared the jam. It is said that the machine "declares a jam" because one of its sensors sees something wrong and sends a message to the main computer telling it to shut down the machine. Potential jam messages and locations are explained and illustrated in the next Subsection.
    c. The Screen tells you in plain English the cause of the jam. Whenever the machine declares a jam, a display message will appear at the bottom of the computer monitor telling you why the machine stopped.
2. **Allow all belts and motors to stop.** If you have any questions about this step, please re-read the Section entitled "Safety First."
3. **If the jam is behind the Cover Guard, open the cover** on the section of the machine where the jam is located and clear the jam.
   Carefully remove jammed or damaged envelopes from the track by gently pulling them out. Be careful not to damage any pulleys, rollers or belts as you remove the envelopes.

4. **If the jam is in the sort bins or the sort bin area, carefully remove the envelopes** from the sort bin where the jam occurred, making sure that pulleys, rollers and the envelope path are clear.
5. **Close the Cover Guards.** Remember, the built-in interlocks will prevent the machine from re-starting if the covers are not closed.
6. **Look at the Jam Screen.** Make sure no offending sensors are listed at the bottom of your computer monitor.
7. **Press the "ENTER" button.** All envelopes already in the track will automatically go into special Rerun Sort Bins, which are explained in the following Section. Your machine will then continue normal operation as before.

TIPS ON CLEARING JAMS:

a. Don't rush. Develop good habits in clearing jams and always be careful when touching or clearing the envelope path.

b. Exercise great care in manually moving any machine belts. As part of the normal task of clearing a jam, it is sometimes necessary to move belts in the envelope path by hand. Normally, belts should be pulled in their usual direction of travel. Pulling them in the opposite direction may cause them to come off of the pulleys. Moving the belts by hand (when necessary) is done to move the envelopes to areas of the envelope path where they are easily removed.

Jam Messages and Locations

Jams can occur at various places on your MPS-30. Usually, a jam will be called because of a **Missing Piece**. The message will be highlighted in red at the bottom of the screen.

The MPS-30 keeps track of envelopes by means of sensors, and a 'missing piece' jam means that an envelope did not arrive at a certain sensor when it was supposed to. When a jam is called for 'missing piece,' you will not see crumpled envelopes. After a quick visual inspection of the paper path, you will merely hit the 'Enter' button, and keep right on working.

Jam messages below are labelled and numbered from 01 to 44 for easy reference (Please note that some numbers may not be listed below because they have been reserved for future use.)

01. Missing piece — OUTSORT Path Sensor
02. Missing piece — TWISTER Path Sensor
03. Missing piece — UMD Entry Sensor
04. Missing piece — METAL Entry Sensor
05. Missing piece — MICR Entry Sensor
06. Missing piece — FINE THICK Entry Sensor
07. Missing piece — STAMP Entry Sensor
08. Missing piece — SLITTER Entry Sensor
09. Missing piece — SLITTER Path Sensor
10. Missing piece — SLITTER Bypass1 Sensor
11. Missing piece — ROW SELECT Sensor
13. Missing piece — BIN1 Sensor
14. Missing piece — BIN2 Sensor
15. Missing piece — BIN3 Sensor
20. All Group Bins Full
22. Feed Empty
25. Feed Jammed
33. Missing piece — BIN4 Sensor
34. Missing piece — BIN5 Sensor
35. Missing piece — BIN6 Sensor
36. Missing piece — BIN7 Sensor
37. Missing piece — BIN8 Sensor
38. Missing piece — BIN9 Sensor
39. Missing piece — BIN10 Sensor
40. Missing piece — BIN11 Sensor
41. Missing piece — BIN12 Sensor
42. Missing piece — BIN13 Sensor
43. Missing piece — BIN14 Sensor
44. Missing piece — BIN15 Sensor

HANDLING RERUNS AND OUTSORTS

Occasionally, some mail will not end up in a pre-designated sort bin and you will have to process it again. This happens most frequently when the machine experiences a jam.

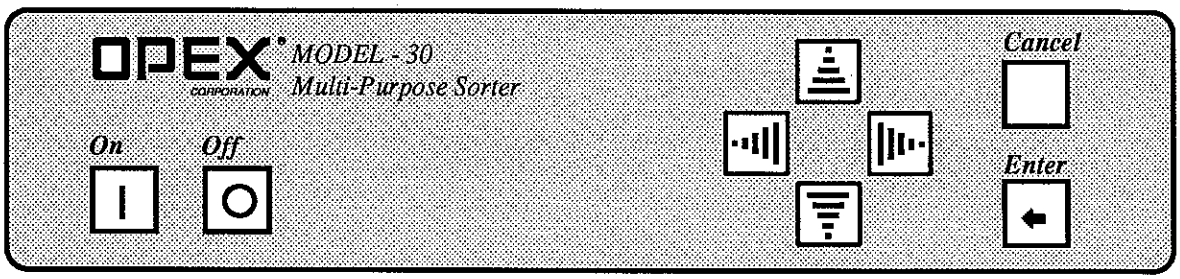
Mail that must be run through the machine a second time is called a Rerun. The last column of sort bins has been set aside for these envelopes. These three sort bins are commonly referred to as Rerun Bins.

As the rerun bins fill and the red light comes on, you can remove the envelopes from them and re-load this mail onto the Feed Conveyor while the MPS-30 continues to run. If you have any questions about loading mail during machine operation, or about emptying full sort bins, refer back to those Sections of the Manual.

Be especially mindful of these rerun bins as the machine operates. You can also empty the rerun bins when the machine shuts down due to a jam.

Some mail cannot be sorted at all because of thickness, envelope damage, etc. Your MPS-30 will automatically remove these envelopes from the sorting process before they ever run through the machine. These envelopes are referred to as Outsorts. Outsorts must be opened and sorted by hand.

A special "holding pocket" or bin is located just in front of the sort bin area to receive outsorts. Do not rerun these envelopes. Remove them at your earliest convenience for later processing.



FINISHING THE JOB

Once a job is completed, you can press the "CANCEL" button to return to the Run Menu. If more envelopes are to be processed for the job you are running, simply load the envelopes and press the "ENTER" button to start the machine running again.

If no more envelopes are to be run for that job, press the "CANCEL" button again to return to the Main Menu.

If there are no other jobs to run at all, press the "CANCEL" button twice to return to the Display Screen.

When you are done, press the "OFF" button. Empty all sort bins. Clean all dust and paper out of the machine.

PLEASE NOTE: Except in an emergency (when the "OFF" button can be pressed at any time), do not press the "OFF" button unless the **DISPLAY SCREEN** is being shown. *If the "OFF" button is pressed without the Display Screen being shown, it could damage the computer on the MPS-30 and cause your machine to stop operating.*

SUMMARY OF OPERATION

For your convenience, the steps involved in operating the MPS-30 (and explained in the previous Sections) are summarized below:

1. Power-up the MPS-30 (Allow 10-15 minutes to warm-up)
2. Load the mail onto the Feed Conveyor and perform simple, routine cleaning
3. Press the "ENTER" button and select your name from the operators list
4. Enter your correct password
5. Select Job Select option from the Main Menu
6. Select Run 1, Run 5 or Run 25 from the Run Menu; if problem occurs, correct and retry
7. If there is no problem, select Run Continuously from Run Menu
8. Monitor the machine: Check and empty sort bins and add mail to Feed Conveyor as required; manage jams
9. Continue until all envelopes are processed
10. If other jobs are to be run, press the "CANCEL" button once to return to the Main Menu and return to Step 5 above
11. If no more jobs are to be run, press the "CANCEL" button twice to return to the original Display Screen
12. Press the "OFF" button, empty all sort bins and clean machine of all dust and paper

GENERAL ADVICE

GOOD THINGS TO DO:

*** At the beginning of your shift and before starting to process the mail for your particular job, perform all of the maintenance and cleaning called for in this Manual.

*** Be extremely careful around the sensors so that they do not get bumped or damaged when cleaning the machine or clearing a jam.
*** Keep ahead of the machine: Empty sort bins as needed; keep the Feed Conveyor fully loaded with mail; re-load reruns when necessary; remove outsorts.

*** Put all mail in the correct mail trays.
*** Exercise caution when clearing jams.
*** Keep the machine clean and free of waste and paper while it is running.

GOOD THINGS NOT TO DO:

*** Don't sit on any part of the machine.
*** Don't allow anyone to bring food or drink around your machine.
*** Don't lean against or abuse the clear acrylic Cover Guards.
*** Don't let anyone who is not qualified operate your machine.
*** Never leave the MPS-30 while it is running.
*** Don't spray Static Guard or other materials into the machine.
*** Don't use solvents (alcohol, Fantastic™ etc.) to clean the orange twister belts on the machine

SPECIFICATIONS

Performance/Capacity Specifications:

Feed Rate:	30,000/hour, with 7.0" Envelope Track
Speed:	108 inches per second
Feed Capacity:	64" stack length (Approx. 10 minutes worth of work)
Output Bin Capacity:	15 bins, 3" stack; may be increased up to 99 bins [NOTE: Last column of 3 bins (Endcap) must be assigned for jam control/ overflow in any job setup.]
Outsort Bin Capacity:	1 bin, 10" stack

Physical Specifications:

Size:	8'x16'x73" tall (at widest point); L-shaped
Weight:	To be determined
Service Access:	3' all around

Electrical Specifications: 208-240 Volt, 60 Hz, 20 Amp single phase input (4-wire)

Envelope Specifications:

Length:	5.0" to 11.5"
Height:	3.5" to 6.12"
Thickness:	.007" to .250"
Weight:	4 oz.

Envelopes within the following limits will pass through the entire envelope path:

Length:	5.0" to 11.5"
Height:	3.5" to 6.12"
Thickness:	.007" to .125"
Weight:	4 oz.

Envelopes within the following limits are readable by the LVDT for fine thickness sort:

Thickness:	.007" to .040"

Computer Specifications:

IBM Compatible 386SX Computer, typically configured with 1 MB RAM, 40 MB Hard Disk Drive, 1.4 MB Floppy Disk Drive.

Personnel Requirements:

The machine in its 15 bin basic configuration is designed to be operated by only one person.

NOTES AND RECORDS